

REMARKS/ARGUMENTS

Claims 1-20 stand rejected. Applicant has thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the references cited therein. The following remarks are believed to be fully responsive to the Office Action. All the pending claims at issue are believed to be patentable over the cited references.

Claims 1-3, 8-10 and 15-17 are amended. No claims are cancelled. No claims are added. As such, claims 1-20 remain pending. Entry of the amendments to claims 1-3, 8-10 and 15-17 is respectfully requested.

Also, the specification has been amended to place the specification in better form. Entry of the amendments to the specification is respectfully requested.

CLAIM REJECTIONS – 35 U.S.C. § 112

Claims 1-7 and 15-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Applicant respectfully traverses. In an effort to advance prosecution, however, Applicant has amended claims 1 and 15 to address this rejection.

Applicant respectfully submits that the rejection has been overcome and requests that the rejection be withdrawn.

CLAIM REJECTIONS – 35 U.S.C. § 103(a)

Claims 1-4, 8-11 and 15-18 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,599,127 to Krijger ("Krijger"). Applicant respectfully traverses.

Claims 5-7, 12-14, 19 and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Krijger in view of U.S. Patent No. 4,790,699 to Ringel (“Ringel”). Applicant respectfully traverses.

In an effort to advance prosecution, Applicant has amended independent claim 1 to recite that the air exchange assembly includes an upper supply elbow mounted on a rotatable plate and communicatively connected to the bottom cap through a rotatable assembly extending through the body to the end of the body adjacent the second end of the bottom cap creating a first passage for air flow for a device to be cooled.

Also in an effort to advance prosecution, Applicant has amended independent claim 8 to recite that the method for directing air flow through an air exchange assembly includes directing the air flow up through a first chamber connected to the bottom cap to an upper supply elbow mounted on a rotatable plate, the first chamber being formed at least in part by a rotatable assembly extending between and communicatively connecting the upper supply elbow to the bottom cap, with the rotatable assembly connected at one end to the rotatable plate and extending through the first chamber to an end of the first chamber adjacent the bottom cap.

Further, in an effort to advance prosecution, Applicant has amended independent claim 15 to recite that the air exchange assembly includes a first chamber means for directing the air flow from the lower supply duct means through the bottom cap to an upper supply elbow mounted on a rotatable plate, the first chamber means being formed at least in part by a rotatable assembly extending between and communicatively connecting the upper supply elbow to the bottom cap, wherein the rotatable plate is attached to another end of the body and the rotatable

assembly extends through the body to the end of the body adjacent the second end of the bottom cap.

It is respectfully submitted that neither Krijger nor Ringel, whether taken singly or in combination, discloses the above described features of claims 1, 8, and 15.

In contrast, Krijger discloses, with reference to Figure 1 therein, that the outer conductor 1 of a coaxial line is divided into a fixed lower part and an upper part which is rotatable with respect to the lower part about a hollow inner conductor 2. The latter, referring to the inner conductor 2, is rigidly secured to the lower part of outer conductor 1. The two parts of outer conductor 1, referring to the fixed lower part and the upper part, are coupled to one another by means of a choke coupler 3. The upper part of outer conductor 1 is closed by means of an end cap 8. In order that the upper part of outer conductor 1 may easily rotate about inner conductor 2, choke coupler 3 and end cap 8 are provided with ball bearings. (Col. 1, lines 49-64 of Krijger).

Further, in contrast, Krijger discloses that the inner conductor 2 of the rotary waveguide joint contains a tube 9 through which a cooling liquid is forced upwards, this cooling liquid being carried off downwards through the space between the inner conductor 2 and the tube 9, provision being further made of means 10 connecting the rotating part of the outer conductor 1 to a heat exchanger 11 on a rotating platform for feeding said cooling liquid to and from said heat exchanger. The part of tube 9 projecting from the inner conductor 2 opens into a chamber 13 and the continuation of the inner conductor 2 opens into another chamber 14. The cooling liquid forced up through tube 9 is fed by way of chamber 13 and outlet pipe 15 to heat exchanger 11. The cooling liquid, the temperature of which has been raised by the heat exchange, is carried off

through inlet pipe 16, chamber 14 and the space between the inner conductor 2 and the tube 9. (Col. 1, lines 65-72 and Col. 2, lines 12-20 of Krijger).

The Office Action refers to the upper supply elbow as corresponding to the chamber 13 and the rotatable plate as corresponding to the end cap 8, with the bottom cap corresponding to the “outline. . . identical to the upper cap 8 but at the bottom” of Krijger . (Office Action, page 3). Further, the Office Action refers to the inner tube 9 and the outer tube 2 as corresponding to a slip ring assembly that is rotatable (Office Action, page 5).

However, it is respectfully submitted that Krijger’s disclosure of the fixed lower part and the upper part of the outer conductor 1 being coupled to one another by means of a choke coupler 3 indicates that the upper rotatable part of the outer conductor 1 does not extend through the outer conductor 1 to an end of the outer conductor 1 adjacent the bottom cap, the bottom cap corresponding to the “outline. . . identical to the upper cap 8 but at the bottom” of Krijger.

Further, Krijger’s disclosure of the inner conductor 2 containing the tube 9 being rigidly secured to the lower part of outer conductor 1 likewise indicates that the inner conductor 2 containing the tube 9 is not rotatable.

Therefore, the above-described features of claims 1, 8, and 15 are not taught or suggested.

Further, in contrast, as illustrated in FIG. 1 therein, Ringel discloses the air feed tube assembly 1 that includes three coaxial tubes, namely an inner tube 1a, a central tube 1b and an outer tube 1c. A liquid coolant is arranged to flow through the inner tube 1a and a compressed air supply is selectively coupled between the tubes 1a and 1b and the tubes 1b and 1c. The left-hand extremity of the outer tube 1c is received in and secured to a flanged receiving end 2a of a

coupling tube 2, into which coupling tube 2 extends the ends of the tubes 1b and 1a. The coupling tube 2 extends into an air feed joint 3, which joint is provided with air feed coupling ports 4 and 5, designed respectively to communicate with the spaces between the tubes 1a and 1b and 1b and 1c. (Col. 2, lines 38-54).

Also, Ringel discloses that the coupling tube 2 extends into a corresponding cylindrical cavity formed in the joint 3 and is supported by a pair of axially spaced apart rotary bearings 6a and 6b. Intermediate the bearings 6a and 6b, the tube 2 is minimally spaced away from the adjacent wall of the joint 3, thereby reducing to a minimum the frictional resistance to movement of the tube 2 with respect to the joint 3. (Col. 2, lines 55-62).

Additionally, referring to FIG. 1 therein, Ringel discloses that the joint 3 is provided with a liquid coolant inlet port 14 which is formed in an end cap 15 of the joint 3 and from which extends, centrally into the joint 3 a coolant duct 16 whose end abuts the adjacent end of the inner tube 1a. The inlet port 14 is, in its turn, coupled to a liquid coolant conduit 17. (Col. 3, lines 14-20).

However, Ringel's tubes 1b, 1c and 2 that communicate with the air feed coupling ports 4 and 5 do not extend to an end of the joint 3 adjacent to the end cap 15. Further, it is respectfully submitted the tube 1a, that abuts the coolant duct 16, appears not to be rotatable, with the coolant duct 16 extending from the inlet port 14, and the inlet port 14 being coupled to the liquid coolant conduit 17. Further, Ringel was only cited as to employing plural supply passages as to dependent claims 5-7, 12-14, 19 and 20. (Office Action, page 6). Therefore, it is respectfully submitted that Ringel likewise does not teach or suggest the above identified features of claims 1, 8, and 15.

In that neither Krijger nor Ringel disclose the above identified features of claims 1, 8, and 15 it is respectfully submitted that it would neither be obvious to combine nor is there a motivation to combine the disclosures of Krijger with Ringel to arrive at the claimed subject matter of claims 1, 8, and 15.

In view of the foregoing, Applicant respectfully submits that independent claims 1, 8, and 15 are allowable for at least the foregoing reasons. Further, claims 2-7, 9-14 and 16-20, which respectively depend from independent claims 1, 8 and 15, are also allowable for at least the foregoing reasons. Therefore, Applicant further respectfully requests that the rejections of claims 1-20 under 35 U.S.C. § 103(a) be withdrawn.

Reconsideration and allowance of claims 1-20 are respectfully requested.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests all the rejections to the claims be withdrawn. If, for any reason, the Examiner disagrees, please call the undersigned attorney at 202-861-1706 in an effort to resolve any matter still outstanding before issuing another action. The undersigned attorney is confident that any issue which might remain can readily be worked out by telephone.

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Patent

In the event this paper is not time filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036 with reference to Attorney Docket No. 03815.1620.

Respectfully submitted,

BAKER & HOSTETLER LLP



Raphael A. Valencia
Reg. No. 43,216

Date: 2/21/07
Washington Square, Suite 1100
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036-5304
Telephone: 202-861-1500
Facsimile: 202-861-1783

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